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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,765	12/16/2003	Ram Huggahalli	P17381	5720

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EXAMINER

FRANKLIN, RICHARD B

ART UNIT PAPER NUMBER

2181

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/736,765	Applicant(s) HUGGAHALLI ET AL.	
	Examiner Richard Franklin	Art Unit 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-14 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-14 and 20-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

[Signature]
FRITZ FLEMING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100
11/8/2006

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 5, 7 – 14, and 20 – 22 are pending.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 24 August 2006 has been entered.

Response to Arguments

3. Applicant's arguments with respect to claims 1 – 5, 7 – 14, and 20 – 22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 – 5, 7 – 14, and 20 – 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the target processor" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

The Examiner has interpreted the limitation to refer to a processor in which the target processor cache is located.

Claim 12 recites the limitation "the target processor" in line 5 of the claim. There is insufficient antecedent basis for this limitation in the claim.

The Examiner has interpreted the limitation to refer to a processor in which the target processor cache is located.

Claim 20 recites the limitation "a target processor cache" in lines 10 – 11 of the claim. There is insufficient antecedent basis for this limitation in the claim. It is not clear if the limitation is referring to a new target processor cache or the target processor cache recited earlier in the claim.

The Examiner has interpreted the limitation as referring to the target processor cache recited earlier in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 – 5, 7 – 14, 20 – 22 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Application Publication No. 2004/0148473 (hereinafter Hughes).

As per claims 1 and 12, Hughes teaches a method and article comprising determining at a requesting agent processor (Figure 5 Item 160) that IO traffic is to be received at a target processor cache (Figure 5 Item 124), wherein the target processor (Figure 5 Item 122) is different than the requesting agent processor; receiving from the requesting agent processor routing information associated with the traffic (Paragraph [0037] "WRITE WITH INJECT"); arranging for the IO traffic to be transferred directly into the target processor cache in accordance with the routing information (Paragraph [0037] Lines 4 – 12), wherein the arranging is performed by a direct memory access controller (Figure 5 Item 126).

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As per claims 2, 13, and 21, Hughes also teaches wherein the routing information is received from an IO driver executing at the requesting agent processor (Paragraph [0036] Lines 3 – 5).

As per claims 3 and 14, Hughes also teaches wherein the routing information includes a direct transfer on/off indication (Paragraph [0037] "WRITE WITH INJECT").

As per claim 4, Hughes also teaches therein the IO traffic is associated with a network interface controller (Paragraph [0035]) or a peripheral component interconnect interface (Paragraph [0064] Lines 8 – 11).

As per claim 5, Hughes also teaches wherein the arranging is performed in a multiprocessor system that includes a plurality of potential target processor caches (Figure 10 Items 622 and 626).

As per claim 7, Hughes also teaches wherein the IO traffic includes information packets (Paragraph [0036] Lines 6 – 8 "payload data").

As per claim 8, Hughes also teaches receiving the IO traffic (Paragraph [0037] Lines 2 – 4); and determining whether the IO traffic should be stored in system memory (Figure 5 Item 170) or be transferred directly into the target processor cache (Paragraph [0037] Lines 4 – 12).

As per claim 9, Hughes also teaches wherein the routing information indicates that one type of IO traffic should be transferred directly into the target processor cache while another type of IO traffic should be transferred direct (Paragraph [0029]).

As per claim 10, Hughes also teaches wherein the IO traffic is received from a peripheral device (Figure 5 Item 160, Paragraph [0035]).

As per claim 11, Hughes also teaches wherein the IO traffic is transferred into the target processor cache in accordance with a chipset's platform routing function (Paragraph [0034] "HyperTransport").

As per claim 20, Hughes teaches a system comprising a network fabric (Figure 10 Item 602); a network interface controller coupled to the network fabric (Figure 10 Item 634) a requesting agent processor (Figure 10 Item 640); a target processor (Figure 10 Items 622 and 626) having a cache (Figure 10 Items 624 and 628), wherein the target processor is different than the requesting agent processor; and a write agent (Figure 10 Item 636) including an input path (Figure 10 [Path between Items 640 and 636]) to receive from the requesting agent processor routing information associated with IO traffic (Paragraph [0037] "WRITE WITH INJECT"); and a processing element (Figure 10 Item 636) to arrange for the IO traffic to be transferred directly into the target processor cache in accordance with the routing information (Paragraph [0037] Lines 4 –

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12), wherein the write agent comprises a direct memory access controller (Figure 10 Item 636).

As per claim 22, Hughes teaches a method comprising receiving from a requesting agent (Figure 5 Item 160) routing information associated with IO traffic (Paragraph [0037] "WRITE WITH INJECT"); arranging for the IO traffic to be transferred directly into a target processor cache (Figure 5 Item 124) in accordance with the routing information (Paragraph [0037] Lines 4 – 12), wherein the arranging is performed by a direct memory access controller (Figure 5 Item 126).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Franklin whose telephone number is (571) 272-0669. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz Fleming can be reached on (571) 272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Richard Franklin
Patent Examiner
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11/8/2006